

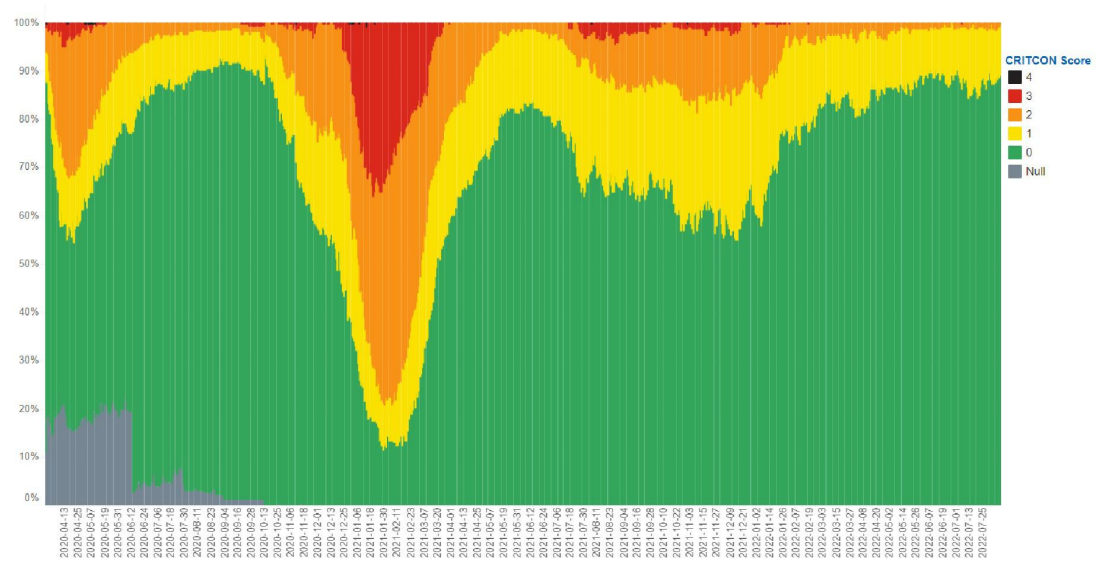
24. Resilience of the NHS should be considered not just in terms of the number of beds available, but also in terms of the people and estate upon which those beds rely.
25. The NHS workforce was already under significant pressure in the run up to the pandemic. In March 2020, there were just over 88,000 substantive posts that were unfilled in NHS organisations¹¹. The impact of these vacancies on staff was demonstrable: with clear links established between workforce shortages and burnout.¹² Indeed, in the same month, anxiety, stress, depression, or other psychiatric illnesses accounted for 21% of all sickness absences.¹³
26. The NHS Estate is the largest and most complicated in England, encompassing some 17,000 buildings. While many of these are newly and purpose built or refurbished facilities, many are not. The current age profile of the NHS estate varies significantly: 12% of the total estate pre-dates the founding of the NHS in 1948, around 17% is over 60 years old, and around 44% is between 30 and 60 years old¹⁴. This meant that on entering the pandemic, there were significant numbers of buildings that were not ideal for modern, digitally enabled healthcare. Ensuring these properties are fit for purpose requires retro-fitting them with the necessary utilities' infrastructure such as power, water and oxygen supply – an ongoing task that became even more important when expanding capacity to deal with COVID-19.
27. When considering pandemic preparedness (plans and capabilities), and the NHS' underlying resilience (beds, workforce, estates), there are a number of high-level lessons that have been identified:

¹¹ <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-vacancies-survey/april-2015--september-2021-experimental-statistics>

¹² <https://committees.parliament.uk/publications/6158/documents/68766/default/>

¹³ NHS Sickness Absence by reason, March 2020: <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-sickness-absence-rates/march-2020>

¹⁴ Statistics from the [ERIC database](#) (Estates Returns Information Collection)

Chart 9: Critical care bed units' CRITCON levels April 2020 - present²⁰

27. As indicated by the unprecedented number of CRITCON Level 3²¹ declarations at the height of the pandemic waves shown in chart 9, supporting critical care patients with COVID-19 was a huge undertaking by staff individually and collectively. Staff working in critical care wards faced significant pressure - a study found that nearly half of Intensive Care Unit (ICU) staff were likely to meet the threshold for PTSD, severe anxiety or problem drinking during the COVID-19 pandemic.²² A national peer support programme for staff working in intensive care units was launched to help support staff.

28. National funding (circa £5m) has been made available to support a training programme to enable non-specialist staff to support critical and enhanced care safely. A further £5m has been invested in pastoral and wellbeing support for all staff working in critical, enhanced, and respiratory care areas.

²⁰ Data source - adult critical care dashboard

²¹ CRITCON is tool for ICU capacity under conditions of system stress (e.g. winter, pandemic, or major incident) designed to reflect real-world ICU pressure, and to be independent of bed numbers and occupancy which can be hard to interpret. This enables units under unusual stress to be visible and to trigger mutual aid, for example through neighbouring hospitals stopping elective activity and opening surge ICU beds supporting a regional response.

²² [Mental health of intensive care staff should be immediate priority | UCL Department of Science, Technology, Engineering and Public Policy - UCL – University College London](#)

and the return to standard IPC measures for all non-respiratory and COVID-19 patients (November 2021)⁴⁸. The UK IPC Guidance was archived by UKHSA in May 2022, with standard and enhanced IPC measures now captured in a National IPC Manual for England, published by NHS England in April 2022⁴⁹.

120. Some providers saw their capacity in emergency departments and general wards reduce by over 15% as a result of IPC measures, particularly where the estate was old and inflexible, and so achieving optimal balance between infection risk and maximising capacity has been essential. Regional IPC teams worked with providers to support the implementation of safe systems of care in line with the national guidance for example the Elective Recovery Programme. As the numbers of patients in hospital with COVID-19 reduced, hospital capacity has increased and recovery is being supported, to include the management of patients with COVID-19 and other infectious diseases as set out in the National IPC Manual England.

3.20 Effective ventilation and air quality in NHS buildings

121. Ventilation was, and still is, vital in the management of Covid-19, particularly where the risk of airborne transmission is higher such as when aerosol generating procedures are being undertaken. NHSE worked with industry experts and DHSC to develop comprehensive [advice and guidance](#) on the legal requirements, design implications, maintenance and operation of specialised ventilation in healthcare premises. This guidance was updated during the pandemic to ensure adequate procedures such as lamina flow and air changes are in place for certain environments.
122. Since then, lessons learnt during the pandemic experience have led to additional guidance being published relating to ultraviolet (UVC) devices for air cleaning and high efficiency particulate air (HEPA filters). Going forward, further work will be undertaken to ensure effective ventilation of new and existing healthcare premises over the longer-term, and increased use of technology such as CO2 monitors.

⁴⁸ <https://www.england.nhs.uk/coronavirus/publication/revised-uk-infection-prevention-and-control-guidance>

⁴⁹ <https://www.england.nhs.uk/publication/national-infection-prevention-and-control/>